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**PROCESSING CABBAGE CULTIVAR  
EVALUATION TRIALS**

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## PROCESSING CABBAGE CULTIVAR EVALUATION TRIAL FOR NORTHWESTERN OHIO

Dale Kretchman, Mark Jameson and Charles Willer

The cabbage cultivar trial was conducted at the Vegetable Crops Branch of the Ohio Agricultural Research and Development Center, near Fremont, Ohio. The soil is a sandy loam. The plots received 600 lbs. per acre of 15-15-15 plus 1 lb. per acre of boron pre-plant broadcast. In addition, each plant received 1/2 pint of starter fertilizer (2 qts./100 gal. of 10-34-0) at planting.

The plants were transplanted on May 10, 1991 in rows 30 ft. long on 30-in. centers. The plants were spaced 18 in. apart. Each cultivar was replicated 4 times in a randomized complete block design except for the observational trial which had single plots only.

Commercial practices for weed, insect and disease control were followed and no serious problems developed during the season. The season was abnormally hot and dry and thus, plots were irrigated when needed to maintain satisfactory growth.

When the majority of the heads in a plot reached maturity as indicated by size and firmness, the cultivars were evaluated for plant size, plant uprightness (for mechanical harvesting), uniformity and apparent head shape. After harvest, weight and numbers of heads were recorded, 3 heads from each plot were cut and core length and equatorial and polar diameters recorded, internal color, leaf mid-rib thickness and tip burn were evaluated.

### Rainfall Totals were:

### Irrigated

May 10 to 31	2.17 in.	June 24	1.25 in.
June	2.63 in.		
July	2.91 in.		
to August 20	1.18 in.		

Seed companies who provided seed for the trials include Ferry Morse Seed Co. (FM), Harris-Moran Seed Co. (HM), Northrup King Co. (NK), Petoseed Co. (PS), Reed's Seeds (R), and Stokes Seeds, Inc. (ST).

Results are summarized in Tables 1-3.

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Table 1. Yield and head characteristics of cabbage cultivars for processing. Replicated Trial-1991.

Cultivar	Source	Harvest Data				Head Characteristics (in)		
		Date harv.	Tons/ acre	Lbs/ head	% cut	Core lgth.	Polar diam.	Equat. diam.
Titanic-90	FM	8/20	42.1	7.2	98.7	3.75	7.95	8.50
Bravo	HM	8/20	41.3	6.7	97.6	3.29	7.12	7.91
Marvellon	R	8/6	40.6	6.3	95.4	2.50	7.75	7.58
Condor	HM	8/6	32.1	5.3	86.2	3.67	7.83	8.00
King Cole	FM	8/6	30.6	5.3	91.2	3.62	7.25	7.45
Atria	R	8/20	29.6	5.1	95.4	3.17	7.50	6.91
Survivor	ST	8/20	25.9	5.0	95.8	2.79	7.20	6.87
Cole Guard	HM	8/20	25.8	5.5	95.8	3.16	6.66	7.45
Safekeeper	ST	8/20	21.1	4.5	95.0	3.04	6.62	6.62
LSD .05			7.6	1.4	----	.47	.54	.76

Table 2. Yield and quality characteristics of cabbage cultivars for processing. Observational Trial-1991.

Cultivar	Source	Harvest Data				Head Characteristics (in)		
		Date harv.	Tons/ acre	Lbs/ head	% cut	Core lgth.	Polar diam.	Equat. diam.
CBO-16	NK	8/20	33.9	5.7	95.2	2.83	7.66	7.00
CB9-01	NK	8/20	36.9	7.5	100.0	3.26	8.33	8.16
FMX-388	FM	8/20	35.2	6.8	90.0	2.66	7.00	7.00
FMX-378	FM	8/6	36.8	6.7	86.4	3.00	7.50	7.50
FMX-361	FM	8/20	38.6	7.4	85.7	3.33	8.66	8.50
FMX-356	FM	8/20	43.4	6.5	100.0	3.66	8.33	7.83
PSX-63880	PS	8/6	31.2	5.1	95.4	3.00	7.16	7.33
HMX-7271	HM	8/20	19.8	3.4	95.2	2.83	7.00	7.00

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Table 3. Additional descriptive observations on cultivars and lines including internal quality-1991.

Cultivar	Comments
Safekeeper	Large frame, good uniformity, slightly tipped, thick mid-ribs, light yellow inside, many small outside basal buds, internal buds, severe thrip damage.
Titanic-90	Medium frame, good uniformity, slightly tipped, thick mid-rib, light yellow inside, some large outside buds, small internal buds, slight to moderate thrip damage.
Atria	Medium frame, good uniformity, upright plants, medium mid-ribs, yellow inside, no outside basal buds, no internal buds, moderate thrip damage.
Marvellon	Large frame, good uniformity, slightly tipped, thick mid-ribs, light yellow inside, no outside basal buds, no internal buds, severe thrip damage.
Survivor	Medium frame, good uniformity, upright plants, thick mid-ribs, light yellow inside, no outside basal buds, few internal buds, severe thrip damage, slight tip burn.
Condor	Medium frame, good uniformity, slightly tipped, medium mid-ribs, light yellow inside, no outside basal buds, many internal buds, severe thrip damage, slight tip burn.
Bravo	Large frame, good uniformity, slightly tipped, medium mid-ribs, light yellow inside, no outside basal buds, few internal buds, light thrip damage, slight to moderate tip burn.
Cole Guard	Medium frame, good uniformity, slightly tipped, thick mid-ribs, yellow green inside, no outside basal buds, few internal buds, severe thrip damage.
King Cole	Medium frame, poor uniformity, very tipped, medium mid-ribs, light yellow inside, no outside basal buds, few internal buds, moderate to severe thrip damage.
CB0-16	Small frame, good uniformity, slightly tipped, thick mid-ribs, light yellow inside, no outside basal buds, few internal buds, very severe thrip damage.
CB9-01	Large frame, good uniformity, very tipped, thick mid-ribs, light yellow inside, no outside basal buds, no internal buds, moderate thrip damage.

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Table 3. Additional descriptive observations on cultivars and lines including internal quality-1991. (cont.)

Cultivar	Comments
FMX-388	Medium frame, good uniformity, slightly tipped, thick mid-ribs, yellow green inside, no outside basal buds, no internal buds, moderate thrip damage.
FMX-378	Medium frame, good uniformity, slightly tipped, thick mid-ribs, light yellow inside, no outside basal buds, few internal buds, very severe thrip damage.
FMX-361	Medium frame, good uniformity, slightly tipped, thick mid-ribs, light yellow inside, no outside basal buds, few internal buds, moderate thrip damage.
FMX-356	Medium frame, poor uniformity, slightly tipped, segregating, thick mid-ribs, light yellow inside, no outside basal buds, no internal buds, very severe thrip damage.
PSX-63880	Medium frame, good uniformity, very tipped, thick mid-ribs, light yellow inside, no outside basal buds, few internal buds, severe thrip damage.
FMX-7271	Small frame, poor uniformity, very tipped, thick mid-ribs, light yellow inside, no outside basal buds, no internal buds, moderate thrip damage.

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